Graduation plan

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**Problem description**

For centuries, medical institutions have been hidden behind the high walls and fences, which substantially influenced patients' perception of the environment they felt as forced into. The strict borders of these spaces were clearly separating “the sick” from a healthy population, both physically and psychologically. This had a strong influence on the psychological state of the new and vulnerable patients entering the unknown and isolated world.

As medicine is rapidly advancing, the architecture of medical buildings became outdated. At present, there are strong debates being led about the future of architecture in this field and how architecture can address these fast changes. The change in the way of thinking is necessary and it is already happening.

The rehabilitation centre as a medical institution is not as closed as hospitals. Disability is not contagious, wheelchair users are healthy people with mobility difficulties. This allows the possibility of creating a building that can be more opened to the outside world and public. Nowadays, hospitals and rehabilitation centres are becoming more and more treated as integral fragments of the urban fabric. They are opening themselves to the community, the same as other public buildings. Their outdoor spaces, as an extension of the existing urban landscape, can act as mitigating public spaces between the city and rehabilitation centre environment.

This new approach in planning and designing of both indoor and outdoor spaces has achieved a shift in medical institutions' public image. As the subject of the graduation studio is a rehabilitation centre and not a hospital where patients are sick and have to be isolated in some way, there is a lot of room for exploring different concepts that can accommodate this program.

How should the patients be accommodated? Should they be separated by age, by injury? Should the still be hidden from the outside world or become a part of the public life of the city? What is possible to be changed in the design of buildings that accommodate such a functional program? These are only some of the questions that need to be answered when designing a new rehabilitation centre.
**Goal of the project**

To “rehabilitate” means to restore to good health or useful life. The person coming as a patient to a rehabilitation centre is not able to lead a normal life because of the injury and the rehabilitation process serves for restoring as much of this ability as possible. The building of a rehabilitation centre is a place where this process occurs, and as such, it has to offer the environment that is stimulating this process.

The building of a rehabilitation centre can play a part in the rehabilitation process. Patients need to be aware that they are in a clinic and that the goal is to recover and leave as soon as possible. For this reason, treatment space and space where patients are staying should be in a strong connection. User recovery is the central point of the design, and it is approached in a way that is different from the present clinical buildings.

The goal is to design a building that will be a stimulating environment for patients to learn from one another and to motivate each other. The whole design concept is based on the idea of transparency of the rehabilitation project, motivating patients to progress and to return to their normal life as soon as possible.

While today most of the new projects try to separate the treatment area from the patient accommodation, offering more pleasant and separate environment and the “non-clinical” feeling, my design is exploring a different possibility. Patients themselves confirmed that seeing other people exercising is very motivating for them. In my opinion, it is very important that patients are well aware that they are in a clinic and not in some other type of building with only pleasant rooms and a view. The goal is to recover from injury, not to stay in a rehabilitation centre for a long time.

This is the reason why I wanted to explore the concept of transparency of the rehabilitation process and the motivation through seeing other people advancing. My design it is a way of exposing the users of the building to each other. The visual relationship of treatment and patient common areas is very strong. A space that is pushing people to go back to their normal life and society should not be closed and introverted. The gradual advancing through the building is important because different environments are addressing the abilities of different patients.
It is very important that every patient stays in an environment that is adjusted to his abilities and injury and pleasant for recovery. The goal is to create several separate environments, each of them taking into the account different level of mobility of patients. The differences are necessary in the way the rooms are organised as well as patients’ common spaces. As patient is recovering, he can change the environments and in this way have a feeling of progress.

**Process**

The workshop led by Birgitte Hansen was a very good start of the designing process – it served for defining an analytical apparatus for all other visited and analysed rehabilitations and hospitals. Visiting different rehabilitation clinics offered insight into the ways of designing this type of buildings which are not that close to most of the students. As a part of the research done for the research seminar of Irene Cieraad, different methods were used for finding what could be improved in the field of design of rehabilitation centres. Observation, interview with the staff, questionnaires and elicitation were the methods used in the research.

In the design process, I rely on the research done and think about the ways the current situation could be improved. As architecture is a discipline that uses spatial means to create different environments, architecture and design of the space can influence the psychological well-being of its users and add to the more pleasant atmosphere of the building. During the process, I use sketches and models, together with AutoCAD drawings, as well as analysis of different reference projects. Consultation with teachers and fellow students is an integral part of the designing process, as well as consulting different professionals in the field of rehabilitation medicine from The Netherlands and other countries.
Literature

As this kind of building should be designed for its users, I did a research for the Research seminar of Irene Cieraad about two main groups of users in a rehabilitation centre: patients and staff members. I consider both groups very important. For this reason, two of my research papers focused on the patients and one on the staff of the clinic. In the first report, I did a research on the importance of family support and spaces for family gathering within the clinic. I consulted several scientific papers on the psychological state of patients in different rehabilitation stages and the importance of the family during this process.

Second report is addressing the issue of involving patients into the public life of the surrounding area. I consulted different scientific papers as well as some of the experiences of patients from different hospitals. After the research, the conclusion was that it is necessary to give the patients freedom to decide to which extent they want to be included into the public life. This is why I proposed a gradual method – from family to fellow patients to society. This possibility of choosing the level of integration into the public life is a way of giving patients back part of the control of their time in the rehabilitation centre which can lead to the growth of their self-esteem and independency which will lead them back to their normal life.

The research about the staff members and their workplace quality was conducted using questionnaire, elicitation, observation and interview of staff members. I focused on the medical staff (nurses and doctors) to find out how their working environment can be improved, mainly focusing on the treatment rooms. It is a place of giving treatment for the staff and receiving treatment for the patient. This is why needs of both groups need to be taken into the account. This research offered insights into what could be improved in the design of treatment areas.

Other literature that I used is concerning the development of clinical buildings (mainly hospitals) and the way they were changing through time. It was also important to do the research about the location of the new building, because there is a long history of medical institutions at the same place. The existing clinic served as a good subject of study for discovering how the design can be done and what can be changed. Three visits to this clinic offered a lot of information about the way the building is organised.
For my specific form of the building, and the idea about the liveliness of the different common spaces in the atrium space I consulted several books addressing atrium buildings and the way they can be designed as human and urban spaces and not cold and distant as they can sometimes become.

As I imagined the atrium as a very pleasant environment with nature inside, I still intend to consult literature about the ways the greenery can be implemented in this type of buildings and about the influence of nature on people.

**Reflection**

As the field of medicine is developing rapidly, the architecture of the clinical buildings should develop and change as well. The solution is in taking care about the needs of all of its users and making a pleasant environment for all of them together. There can be no perfect solution, because architecture is a very different discipline from medicine and cannot change as quickly. But, there is a possibility of pushing certain limits of thinking about clinical buildings in this project.

This approach could bring new perspectives for the design that is oriented towards the motivation of users that are the most vulnerable group of users of the building and it is a transition between a completely introverted building and a public building.

All the designs within the studio are different and there cannot be one good answer to the question of how the rehabilitation centres should look like in the future. Every student is exploring the limits and possibilities of different ideas and concepts and that is making the designing process valuable for the whole architectural debate about the future of the clinical buildings.
Planning

Plan for P2:

- Concept development
- First design of the building (plans, sections, models)
- Connection between the location and the inside of a rehabilitation centre
- Developing the concept of different patient floors
- Façade design proposal
- Interior materialisation proposal
- Analysing construction possibilities
- First construction concept

The P2 presentation will be on January 25th.

Plan for P3:

- Adjusting final details of the concept
- Materialisation
- Further work on the façade
- Layout and surroundings of the whole building – landscaping
- Atrium space development (as a winter garden and “public space”)
- Building physics concept
- Developing construction
- Sustainability

Plan for P4:

- Further work on materialisation
- Finishing the façade design
- Finishing building physics
- Making details
- Adjusting remaining points

P4 presentation (date unknown)

For the P5 all points discussed at the P4 will be improved and further developed.